Ordering number: EN 2105A

SANYO

No.2015A

2SC3808

NPN Epitaxial Planar Silicon Transistor
High hFE, Low Frequency
General-Purpose Amp Applications

Applications

- Low frequency general-purpose amplifiers, drivers

Features

- Large current capacity (I_C=2A)
- Adoption of MBIT process
- High DC current gain (h_{FE}=800 to 3200)
- Low collector-to-emitter saturation voltage ($V_{CE(sat)} \leqq 0.5V$)
- High V_{EBO} ($V_{EBO} \geqq 15V$)

Absolute Maximum Ratings at Ta=25°C

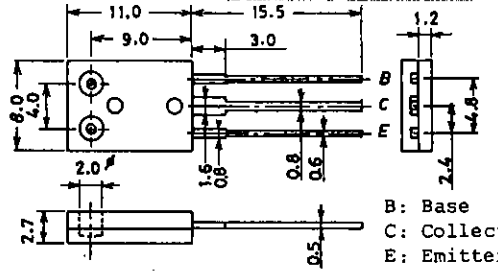
				unit
Collector to Base Voltage	V_{CBO}		80	V
Collector to Emitter Voltage	V_{CEO}		60	V
Emitter to Base Voltage	V_{EBO}		15	V
Collector Current	I_C		2	A
Peak Collector Current	icp		4	A
Collector Dissipation	Pc		1.2	W
		Tc=25°C	15	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=50V, I_E=0			1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=10V, I_C=0			1	μA
DC Current Gain	$h_{FE}(1)$	V_{CE}=5V, I_C=500mA	800	1500	3200	
	$h_{FE}(2)$	V_{CE}=5V, I_C=1A	600			
Gain-Bandwidth Product	f_T	V_{CE}=10V, I_C=50mA		170		MHz
Output Capacitance	c_{ob}	V_{CE}=10V, f=1MHz		24		pF
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=1A, I_B=20mA		0.2	0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=1A, I_B=20mA		0.87	1.2	V
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10μA, I_E=0	80			V

Continued on next page.

Package Dimensions 2043A
(unit: mm)



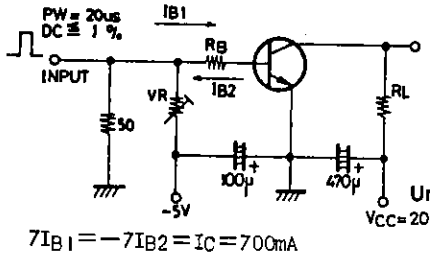
B: Base
C: Collector
E: Emitter

SANYO: TO126LP

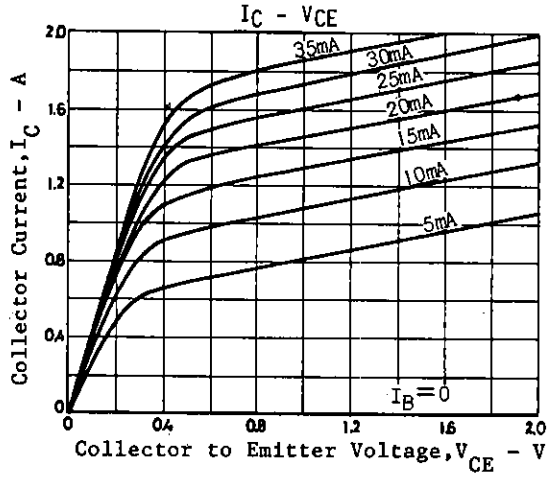
Continued from preceding page.

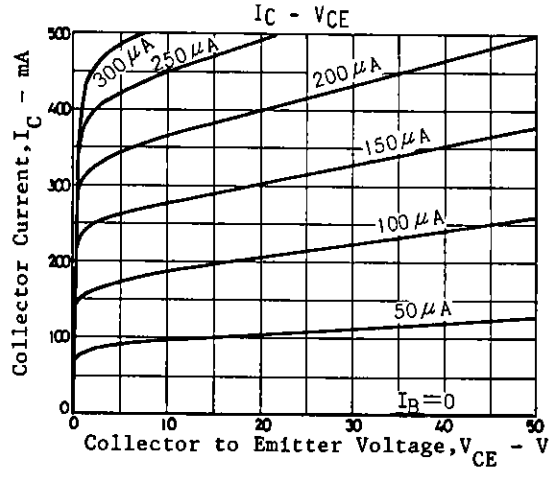
			min	typ	max	unit
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, R_{BE}=∞	60			V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=10uA, I_C=0	15			V
Turn-on Time	ton	See specified Test Circuit.		0.23		μs
Storage Temperature	tstg	"		2.7		μs
Fall Time	tf	"		0.75		μs

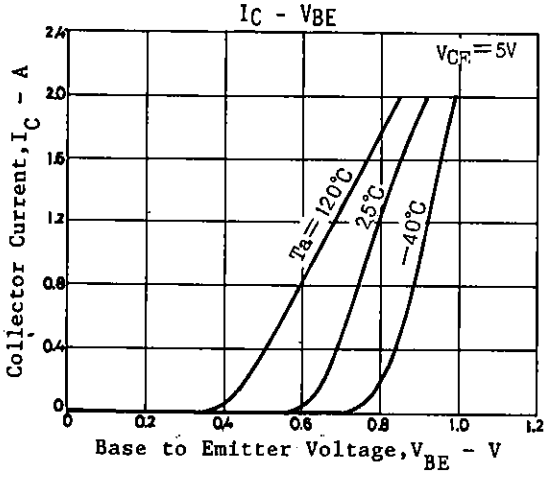
Switching Time Test Circuit

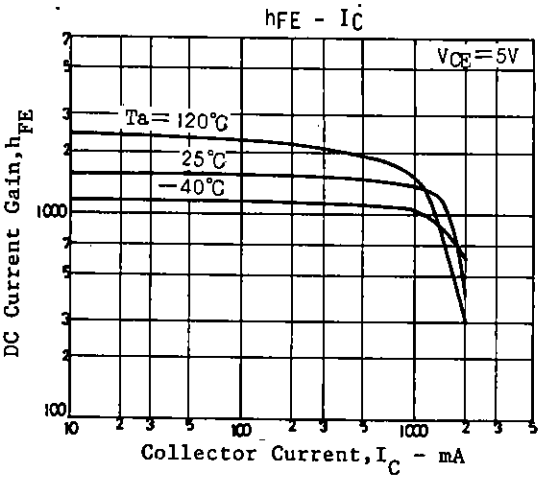


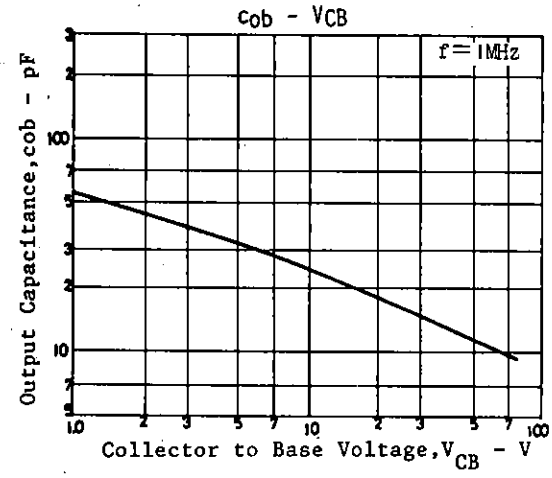
$7I_{B1} = -7I_{B2} = I_C = 700mA$

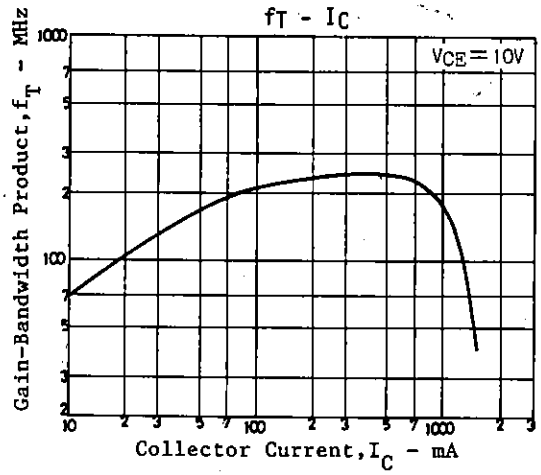


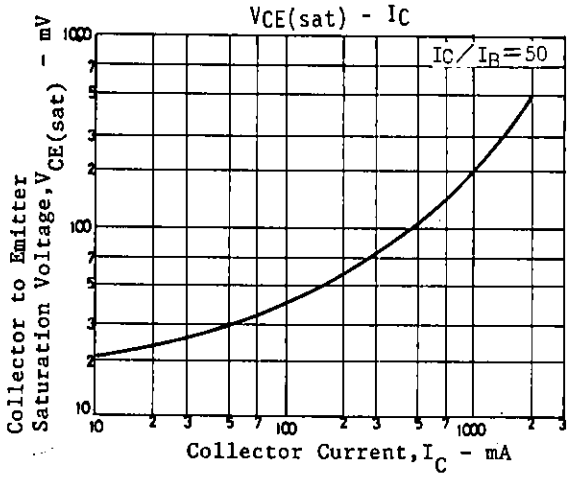


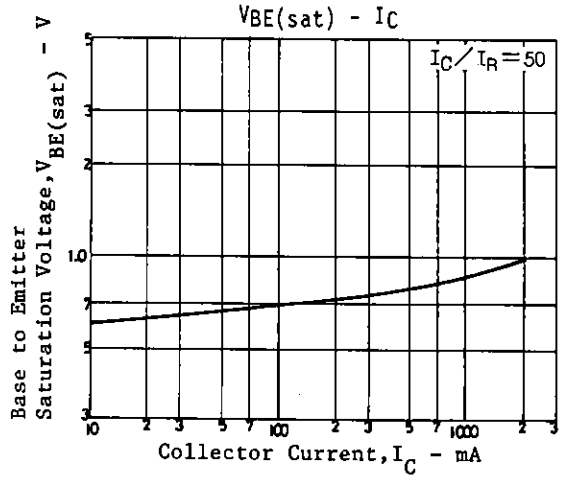


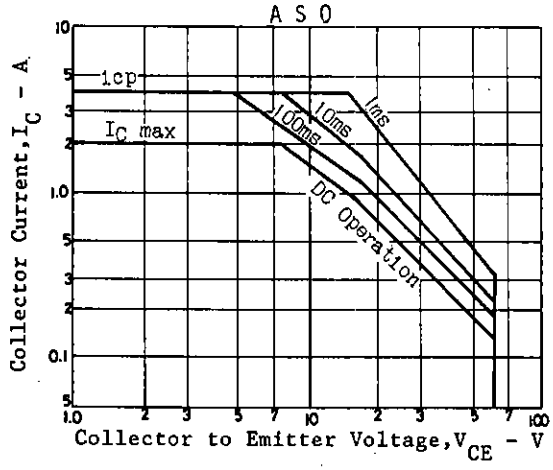


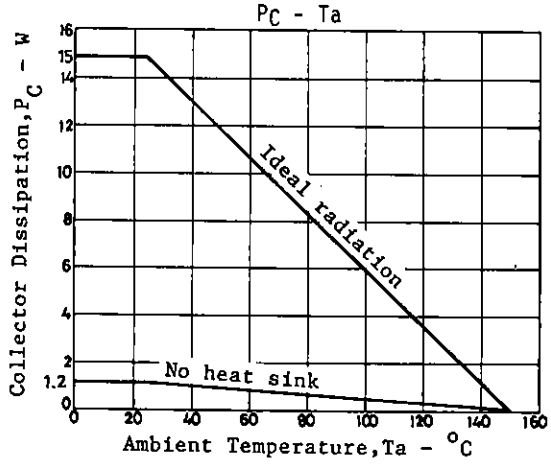












■ No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.

■ Anyone purchasing any products described or contained herein for an above-mentioned use shall:
① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.

■ Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.